

FINAL
NAVAL AIR STATION ALAMEDA RESTORATION ADVISORY BOARD
MEETING SUMMARY

<http://www.efdswnavfac.navy.mil/environmental/AlamedaPoint.htm>
Building 1, Suite 140, Community Conference Center
Alameda Point
Alameda, California

April 13, 2004

The following participants attended the meeting:

Co-Chairs:

Thomas Macchiarella	Naval Facilities Engineering Command, Southwest Division (SWDIV), Base Realignment and Closure (BRAC) Environmental Coordinator (BEC), Navy Co-chair
Jean Sweeney	Restoration Advisory Board (RAB), Community Co-chair

Attendees:

Cassie Cioci	U.S. Coast Guard (USCG)
Neil Coe	RAB
Anna-Marie Cook	U.S. Environmental Protection Agency (EPA)
David Cooper	EPA
Ardella Dailey	RAB/Alameda Unified School District (AUSD)
Doug DeHaan	RAB
Claudia Domingo	SWDIV Remedial Project Manager (RPM)
Tony Dover	RAB
Gwen Eng	Agency for Toxic Substances and Disease Registry (ATSDR)
Jim Helge	Tetra Tech EM Inc. (Tetra Tech)
George Humphreys	RAB
Elizabeth Johnson	City of Alameda
James D. Leach	RAB
Marcia Liao	Department of Toxic Substance Control (DTSC)
Gregory Lorton	SWDIV, Lead RPM
Patrick Lynch	Community Member
Bert Morgan	RAB
Darren Newton	SWDIV RPM
Lona Pearson	Tetra Tech

Kurt Peterson	RAB
Kevin Reilly	RAB
Michael Schmitz	RAB
Dale Smith	RAB/Sierra Club
Michael John Torrey	RAB/Housing Authority of the City of Alameda
John Warren	Shaw Environmental and Infrastructure Inc. (Shaw)

The meeting agenda is provided in Attachment A.

MEETING SUMMARY

I. Approval of Minutes

Mr. Macchiarella, Navy Co-chair, called the meeting to order at 6:40 p.m.

Mr. Macchiarella asked for comments on the March 9, 2004, meeting minutes. Mr. Torrey, Ms. Johnson, and Mr. Macchiarella provided the comments summarized below.

Mr. Torrey's Comment

- Mr. Torrey requested a global correction for the acronym ATSDR.

Ms. Johnson's Comment

- On page 4 of 16, third paragraph and in the first sentence, "Alameda Reuse and Redevelopment Agency (ARRA)" should be revised to "Alameda Reuse and Redevelopment Authority (ARRA)".

Mr. Macchiarella's Comment

- On page 14 of 16, the last paragraph should be added to the end of the third paragraph.

The minutes were approved based on incorporation of the comments summarized above.

II. Co-Chair Announcements

Ms. Sweeney stated that the following documents are now available for review in the Information Repository:

- Draft Operable Unit (OU)-2B Remedial Investigation (RI) Report, Sites 3, 4, 11 and 21. April 1, 2004.
- Field Activity Report and Assessment of Polynuclear Aromatic Hydrocarbons (PAH) Contamination at Selected Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Sites and Environmental Baseline Survey (EBS) Parcels. April 2004.

- Comments by the Sierra Club on the ATSDR Public Health Assessment for Naval Air Station Alameda. March 30, 2004.

Ms. Sweeney requested that the RAB reinstate the document review focus groups. She stated that there are many documents currently in the review stage that should be reviewed by a focus group. Ms. Sweeney stated that RAB member Lea Loizos would usually initiate the focus group sign up, but could not attend tonight's meeting. Ms. Sweeney asked the RAB for suggestions in forming new focus groups or if there are any volunteers. Mr. Peterson commented that the document topics would probably determine who would be the focus group lead.

Mr. Macchiarella stated that some RABs have a designated focus group to review all documents and other RABs have rotating focus group members depending on the document topic. Mr. Macchiarella asked if there is a designated focus group lead person. Ms. Smith replied that there is not a specific person that leads the focus groups. Mr. Macchiarella suggested that when Ms. Sweeney receives documents she could notify the RAB by telephone or e-mail and conduct a group meeting to discuss the need for a focus group on any particular document.

Ms. Smith suggested that upcoming document submittal dates be provided at least a month prior to their actual delivery. Ms. Sweeney added that sometimes by the time the presentations are given to the RAB and members become interested in the document, it is too late to provide comments. Mr. DeHaan stated that the Navy has always given extra time if needed for the RAB to provide their comments. Mr. Macchiarella stated that the Navy would try to do a better job of providing advance notice to the RAB about the anticipated document deliveries. He stated that sometimes it is hard to predict the delivery dates when there are internal changes to the documents.

Ms. Dailey asked if a list could be created and included in the mailing with the agenda that describes upcoming documents and their due dates. These documents could then be discussed and depending on the site, would interest certain members to create a focus group. The documents of interest could also be tagged for an early presentation. Ms. Sweeney commented that Ms. Dailey has a good idea, but that she would still like a list of volunteers to review the documents on hand. Ms. Sweeney stated that over a month's time a number of documents can be submitted, and that it would be nice if she had a set list of people to contact regarding document reviews; however, no committee members were identified.

Mr. Macchiarella announced that he would like to get the Alameda Point RAB Charter (Charter) reinstated. He stated that the Charter was hard to track down and the one he found is old and he is not sure it is "the Charter." Mr. Macchiarella stated that the Charter is ready for a rewrite since they should be updated at least every two years. Mr. Macchiarella suggested that a subcommittee be formed to rewrite the Charter. He stated that he could provide an electronic format of a draft Charter that the subcommittee can use to get started. Mr. Peterson stated that renewing the Charter would be a good opportunity for a focus group discussion. Mr. Macchiarella stated that he also has new draft guidance and policies that can be added to the Charter. Ms. Sweeney asked if there are any volunteers to form the subcommittee. Ms. Sweeney, Mr. Peterson, Mr. Torrey and Mr. Morgan all volunteered for the subcommittee. Ms. Smith suggested that some of the items that can be updated are the protocols for new members and meeting date changes.

III. RAB Meeting Date Change

Mr. Macchiarella opened the discussion for the meeting date to be changed from the second Tuesday of each month to the first Thursday of each month. The meeting date was originally changed from the first Tuesday of each month to the second Tuesday of the month so city council members could attend the RAB meetings without a conflict with city council meetings. The second Tuesday date conflicted with the AUSD meeting schedule and therefore, displaced Ms. Dailey (RAB member and AUSD representative). Mr. Macchiarella stated that after several discussions with the RAB, the city council, and AUSD, a change to the first Thursday would work for most everyone's schedule.

Mr. Macchiarella requested a motion to vote on the RAB date to be changed to the first Thursday of each month, Mr. Dover moved and Mr. Schmitz seconded. The RAB voted and passed the date change unanimously.

The RAB agreed that the date change would start on June 3, 2004, to allow sufficient time for community notification. The May RAB meeting will still be held on the second Tuesday of the month, May 11, 2004.

IV. RAB Applicant Frank Mataresse Vote

Mr. Macchiarella stated that Mr. Mataresse was chosen by the city council for representation on the RAB. Although Mr. Mataresse was not in attendance, Mr. Macchiarella requested a motion to approve Mr. Mataresse's application to the RAB. Mr. Peterson requested the motion to be delayed until Mr. Mataresse could attend the RAB meeting. A discussion ensued on whether or not Mr. Mataresse was aware that the RAB meetings were open to the public and that he could attend without being an official member. The motion to vote on the acceptance of Mr. Mataresse to the RAB was tabled until the May or June RAB meeting when Mr. Mataresse could attend.

V. Draft Operable Unit-2A Remedial Investigation Presentation

Mr. Lorton stated that the OU-2A RI came out at the end of February and is currently available for review. Mr. Lorton introduced Mr. Helge to provide the overview presentation of the OU-2A RI. A handout was provided and is included as Attachment B-1.

Mr. Helge discussed the objectives of the RI, and described each OU-2A site in terms of history, location, features, constituents of concern, and risk assessment results. Risk drivers for each site were also discussed. He stated that the presentation is an overview of the actual report and that tables used in the presentation are only subsets of data taken from all of the data used in the risk assessments.

Site 9

Mr. Helge stated that Site 9 (Building 410) was used as a paint stripping facility. Types of chemicals used during site activities include solvents and surfactants and there were also undocumented releases of jet fuel. Three aboveground storage tanks (AST), an industrial waste treatment plant (IWTP) and two oil and water separators (OWS) were also located at Site 9. Building 410 was constructed in 1958. Between the years 1958 and 1973 the material stripped from the planes was washed off into the floor drains and discharged into storm sewers that emptied into the Seaplane Lagoon (SPL). After passage of the Clean Water Act in 1973, the IWTP was constructed to treat the material before discharge under permit to East Bay Municipal

Utility District (EBMUD). It is believed that leaks in the pipes leading to the storm drain system and the IWTP released contaminants directly into the groundwater. Supporting this belief, there is no significant amount of soil contamination at the site (see Slide 7 of the handout for groundwater analytical results for Site 9). Risk drivers at Site 9 are mainly found in the groundwater as shown on Slide 8 of the presentation. Arsenic was the only soil risk driver and was determined to be within background levels.

Ms. Dailey commented that her understanding was that arsenic background was determined on a site-by-site basis. Mr. Helge replied that arsenic at Site 9 was compared to data collected from similar fill areas.

Mr. Helge discussed the groundwater contaminant plumes on Slides 9 through 13. Plume migration was then discussed. Mr. Lorton stated that Site 9 is one of the bigger problem sites within OU-2A that presents a higher risk. Site 9 will undergo a feasibility study (FS) to address the chlorinated hydrocarbons and other volatile organic compounds (VOC) in the groundwater.

Site 13

Mr. Helge stated that Site 13 contains Building 397, a jet engine test cell, which has ongoing total petroleum hydrocarbon (TPH) removal as Corrective Action Area (CAA)-13 because of jet fuel releases, and was the previous site of the Pacific Coast Refinery between 1873 and 1903. The former refinery activities appear to pose the biggest problem at the site. Other features of Site 13 include a mini-storage and recreational vehicle (RV) parking lot, a Resource Conservation and Recovery Act (RCRA) generation accumulation point (GAP) and OWS around Building 397 (handled under the TPH program with Building 397), and ASTs also known as Area of Concern (AOC)-9.

Mr. Helge discussed historical removal actions conducted at Site 13 including: jet fuel free product removal, TPH contaminated soil removal, lead and PAH contaminated soil removal, and lead impacted soil (believed to be tarry refinery waste [TRW]) removal. A summary of the soil analytical results is shown on Slide 16 and groundwater analytical results are shown on Slide 17 of the handout. The contamination at Site 13 was initially found because the Aircraft Intermediate Maintenance Department (AIMD) had planned to construct a building at the site. When they conducted a geotechnical investigation for building design they discovered extensive contamination, which consequently halted the construction project and resulted in the 1993 lead-impacted soil removal action.

Mr. Helge stated that the human health risk assessment (HHRA) for Site 13 does not include samples taken directly from the TRW, because of the high level of uncertainty associated with the TRW. He stated that the Navy recognizes that the TRW is a source material that poses a significant risk and will be evaluated in the FS (see Slide 18 for the HHRA summary). Site 13 will undergo a FS to address TRW in soil and hydrocarbon contaminants in groundwater.

Ms. Sweeney asked if the owner of the previous Pacific Coast Refinery is involved in the cleanup. Mr. Lorton replied that the owners are Chevron/Texaco and that the Navy lawyers are considering adding them as a Potential Responsible Party, to share clean up cost. Mr. Lorton stated that the refinery process conducted in the late 1800s was to crack petroleum with acid (possibly sulfuric acid). Some of the TRW material has a very acidic pH between 1 and 2. Since the TRW's composition strongly suggests refinery waste and the location of the material is close to the outlines of the refining equipment and the poor housekeeping practices of the time may have resulted in the release of waste materials at or near the facility, the material is believed to

have originated from the historical refinery activities. Mr. DeHaan asked where the lead could have come from. Mr. Lorton stated that the lead could be anomalous since it is a constituent of ash and petroleum and that tetraethyl lead would not be expected from refinery wastes, since the period of operation of the refinery predated the modern use of gasoline.

Mr. Helge continued with his presentation and discussed the correlation between the original shoreline and refinery location with the distribution of the TRW and PAH contamination. He stated that benzene in soil also directly correlates to the TRW. Mr. Helge stated that several test pits were excavated in summer 2003 to determine the depth and characteristics of the material. The TRW retrieved from the test pits was black, thick and asphaltic. Mr. Helge stated that high lead detections were found in samples taken from the test pits. Photographs of the TRW are shown on Slides 21, 22, and 23.

Ms. Dailey asked at what depth is the TRW. Mr. Helge stated that the TRW was found in the test pits between 3 to 7 feet below ground surface (bgs), and that groundwater was encountered between 6 and 6.5 feet bgs.

Mr. Helge stated that there are two separate groundwater TPH plumes at Site 13 and the source is undetermined; however the TRW could be causing floating product where it interfaces with the groundwater. Mr. Peterson asked if the groundwater plumes are moving. Mr. Helge replied that the plume does not appear to be moving since the TRW is thick and sorbed to the soil.

Mr. Lynch asked if a fence has been constructed around Site 13. Mr. Helge stated that the fence has been constructed to protect the public. Mr. Cooper asked if there are warning signs posted on the fence. Mr. Lorton replied that the signs are being ordered, and that he does not want the signs to draw attention to the site. Mr. Schmitz commented that prominent warning signs should be posted to warn parents of small children that there are hazardous conditions at the site and to not let their children play near the area. Mr. Lorton replied that the signs would probably state that there is an environmental cleanup action in progress. Mr. Schmitz stated that there could be a "community right to know" issue that should be considered when creating the signs.

Site 19

Mr. Helge stated that Site 19, also known as Yard D-13, was a former hazardous waste storage yard. Site 19 features are Building 616 used for hazardous material storage and office space, solid waste management unit (SWMU) 616, former Building 609 used for engine part storage, Yard D-13 (used currently by Foss Environmental), and UST 616-1 and 616-2 that have never been used. Mr. Helge stated that Yard D-13 was closed under RCRA permit and is still being investigated under CERCLA.

Mr. Helge stated that the soil and groundwater sample analyses were conducted for chemicals that were historically stored at Site 19. The soil analytical result highlights for Site 19 are shown on Slide 30 and groundwater analytical results for Site 19 are shown on Slide 31. Mr. DeHaan commented that the Yard D-13 structure was constructed in the late 1980s and probably has every spill completely documented. Mr. Helge stated that not all the chemicals detected in the groundwater were detected in the soil, but the chemicals were still included on the soil table (see Slide 30) for comparison. The HHRA risk drivers for Site 19 are found mainly in the groundwater except for arsenic (determined to be background) and PAHs in soil (see Slide 32 for the HHRA summary). Mr. Helge stated that the tetrachloroethene (PCE) and trichloroethene (TCE) found in groundwater at the site could indicate a new release (20 to 25 years) since no breakdown chemicals have been detected. Ms. Sweeney asked if there is a sewer or storm line in

the area. Mr. Helge replied that there are no drain lines but that there are some cracks in the concrete where material could have spilled through based on the previous use at the site. Site 19 will undergo a FS to address chlorinated hydrocarbons and other VOCs in the groundwater.

Site 22

Mr. Helge stated that Site 22 was used as a former gasoline station and car wash. Before it was a gasoline station it was a barracks. He stated that this site was advanced into the CERCLA program because it was thought to contain waste oil USTs. The UST were never found and the site is currently being addressed under the TPH strategy. A work plan and corrective action plan (CAP) for TPH remediation have been submitted to the regulatory agencies. The groundwater and soil analytical results found at the site are chemicals associated with gasoline (see Slides 37 and 38).

Mr. Helge discussed the HHRA risks in groundwater as being typical of a gasoline station-type site. Lead in soil was determined to pose a risk according to the DTSC Lead Spread 7 risk assessment model. Samples for lead were collected all over the site, but only one sample was significantly elevated at 10,000 parts per million. Mr. Helge stated that because of the hot spot, Site 22 would undergo a FS to address the lead in the soil. Groundwater will not be addressed in the FS because it is already being addressed under the TPH strategy.

Mr. Peterson asked if other samples have been collected near the lead hot spot. Mr. Helge replied that samples have been taken all over the site and detections have been below or at background; however, more sampling is planned for confirmation purposes. Mr. Humphreys suggested that a battery or batteries being dumped there could have caused the hot spot.

Mr. Helge stated that the TPH in groundwater is consistent with gasoline station contamination and probably caused from a leaking connection under the dispenser pumps. Mr. Peterson asked if the gasoline plume would continue to migrate up gradient toward the soccer fields. Mr. Helge stated that since the source is discontinued the radial plume would not continue to expand upgradient, but flow with groundwater toward the west. Mr. Peterson requested plume concentration data from both up gradient and down gradient of the gas station. Mr. Helge stated that he did not have the data in front of him, but could provide Mr. Peterson with that information if he submitted a written request to the Navy.

Site 23

Mr. Helge stated that Site 23 contains Building 530, the missile rework building. In addition, Site 23 previously contained a former plane defueling area that was located directly west of Building 530, three former SWMUs, three former ASTs, and former Building 460A. The site also contains Buildings 529, 600, and 606, and the Navy mini-exchange Buildings MS-11 through MS-19. Site 23 is also located in CAA 13 where there is an ongoing TPH removal action. Mr. Lorton added that over 25 tons of fuel has been removed from Site 23 during the TPH removal action.

Mr. Helge explained that plane defueling consisted of rolling up a plane, and dumping its fuel, which was mostly captured into an OWS and recovered by the Navy; however, some of the fuel was not captured.

Mr. Helge presented tables that summarize the chemicals historically used at Site 23. Elevated concentration of petroleum constituents and PAHs were detected in soil (see slide 46). Elevated concentrations of petroleum constituents were detected in groundwater (see Slide 47). The

HHRA indicates that arsenic (as background) and PAHs in soil are risk drivers and that arsenic (as background), ethylbenzene, and naphthalene are risk drivers in groundwater (see slide 48). Mr. Helge stated that Site 23 would undergo a FS to address the PAHs in the soil. Groundwater will not be addressed in the FS because it is already being addressed under the TPH program.

VI. Petroleum Program Update

Due to time constraints the presentation on the petroleum program update was not given. Mr. Lorton stated that the presentation would be postponed. He stated that 50,800 pounds of petroleum hydrocarbon products have been removed from Site 23 and that approximately 70 percent of that removal has involved free product.

Mr. DeHaan asked when the plane defueling area west of Building 530 in Site 23 was established and if there are any other defueling areas in that vicinity. Mr. Lorton replied that the information he has seen indicates that the Site 23 defueling area has been used for defueling since the 1940s. Mr. DeHaan stated that he thinks the area west of Building 530 has only been used since the 1970s and that earlier defueling occurred north of that area near Site 13. Mr. Lorton stated that historical aerial photos indicate the area to the north of Building 530 was used for airplane storage. Mr. Lorton stated that he would be interested to find some information on defueling activities occurring at Site 13. He stated he would have concerns of the fuel mixing with the TRW. Ms. Sweeney asked what could happen if the fuel mixes with the TRW. Mr. Lorton stated that the fuel could cause the TRW to breakdown and become mobile. Mr. DeHaan asked if the TRW could be characterized. Mr. Lorton replied that the TRW has been characterized as originating from Monterey Bay crude oil.

VII. BCT Activities

Ms. Cook presented an update of the BCT activities from the previous month. A handout was provided and is included in Attachment B-2. Ms. Cook discussed the topics addressed from the March 16, 2004 BCT meeting, and a follow up conference call concerning ecological risk on March 24, 2004 with the Navy, DTSC and the EPA's ecological expert, Dr. Ned Black. See Attachment B-2 for Ms. Cook's BCT update discussion.

VII. Community and RAB Comment Period

Mr. Torrey stated that on Monarch Street near the skate park he observed two groundwater wells that are open and in disrepair with cracked lids. Mr. Macchiarella replied that he would have the condition of the wells checked out and get them repaired if needed.

Mr. Torrey announced that the East Bay Conversion and Reinvestment Commission has announced their annual Base Walkers Golf Classic on Friday June 11, 2004, beginning at 11:00 am.

Mr. Lynch commented that he appreciates the fence being constructed around Site 13, but that it should not have taken 7 years to construct; he also stated that warning signage still needs to be provided to protect the community.

Ms. Sweeney stated that the next meeting would be held on Tuesday May 11, 2004. The meeting adjourned at 8:47 p.m.

ATTACHMENT A

**NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING AGENDA
April 13, 2004**

(One Page)

RESTORATION ADVISORY BOARD

NAVAL AIR STATION, ALAMEDA

AGENDA

APRIL 13, 2004 6:30 PM

ALAMEDA POINT – BUILDING 1 – SUITE 140

COMMUNITY CONFERENCE ROOM

(FROM PARKING LOT ON W MIDWAY AVE, ENTER THROUGH MIDDLE WING)

<u>TIME</u>	<u>SUBJECT</u>	<u>PRESENTER</u>
6:30 - 6:40	Approval of Minutes	Jean Sweeney
6:40 - 6:50	Co-Chair Announcements	Co-Chairs
6:50 – 7:00	RAB Meeting Date Change	Co-Chairs
7:00 – 7:05	RAB Applicant Frank Mataresse Vote	Co-Chairs
7:05 – 7:45	Draft OU-2A RI Sites 9, 13, 19, 22 and 23	Greg Lorton and Jim Helge (Tetra Tech)
7:45 – 8:05	Petroleum Program Update	Greg Lorton
8:05 – 8:15	BCT Activities	Mark Ripperda or Anna-Marie Cook
8:15 – 8:30	Community & RAB Comment Period	Community & RAB
8:30	RAB Meeting Adjournment	

ATTACHMENT B

NAVAL AIR STATION ALAMEDA RESTORATION ADVISORY BOARD MEETING HANDOUT MATERIALS

- B-1 Draft OU-2A (Sites 9, 13, 19, 22 and 23) RI Report Summary, Presented by Jim Helge, Tetra Tech. April 13, 2004. (26 pages)
- B-2 BCT Activities Update for March, Presented by Anna-Marie Cook, EPA. April 13, 2004. (1 page)

ATTACHMENT B-1
DRAFT OU-2A RI REPORT SUMMARY
(26 Pages)



ALAMEDA POINT
ALAMEDA, CALIFORNIA



Operable Unit 2A
Remedial Investigation Report
Sites 9, 13, 19, 22, and 23

Greg Lorton
Remedial Project Manager
NAVFAC Southwest Division

April 13, 2004

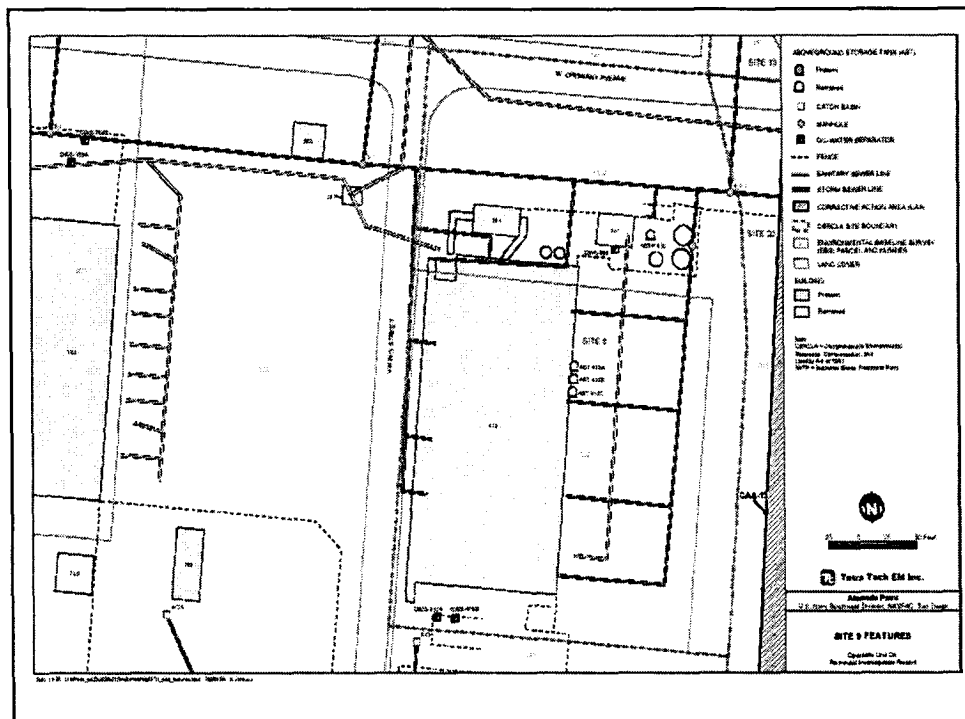


ALAMEDA POINT
ALAMEDA, CALIFORNIA



Remedial Investigation Objectives

- Collect soil and groundwater data for characterization of the sites and in support of a FS, if necessary
 - Evaluate each site's physical setting, geology, hydrogeology, and ecology
 - Assess the nature and extent and fate and transport of those chemicals at each site demonstrating significant risk
 - Conduct background comparisons for soil and groundwater
 - Conduct an ERA and HHRA for each site
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ALAMEDA POINT ALAMEDA, CALIFORNIA



SOIL ANALYTICAL RESULTS FOR CHEMICALS USED AT SITE 9

Remedial Investigation Report, Operable Unit 2A, Internal Draft

Chemical	Residential PRG (mg/kg)	Range of Concentrations (mg/kg)	Sampling Location of Maximum Detected Concentration
1,1,1-TCA	1,200	Not Detected	Not applicable
1,1-DCA	2.8*	Not Detected	Not applicable
1,2-DCA	0.28	Not Detected	Not applicable
PCE	1.5	0.001 to 0.002	153-IW-002
Trichloroethylene (TCE)	0.053	Not Detected	Not applicable
1,2-DCE (total)	43 (as cis-)	0.001 to 0.130	CPT-S09-10
Vinyl Chloride	0.079	Not Detected	Not applicable
1,2-dichloropropane (DCP)	0.34	Not Detected	Not applicable
1,2,3- trichloropropane (TCP)	120	Not Detected	Not applicable
Benzene	0.6	Not Detected	Not applicable
Ethylbenzene	8.9	0.002 to 0.200	B410-8
Toluene	520	0.002 to 0.730	B410-7
Xylene	270	0.002 to 3.100	CPT-S09-10
Chromium	210	0.019 to 0.178	CPT-S09-07
Naphthalene	56	0.035 to 0.170	9S-CH3
Methylene chloride	9.1	0.002 to 0.007.7	9S-CH3
Phenol	37,000	0.042	B410-5

Residential PRG is provided for reference only. Risks are quantified in the HHRA section of this document.

* denoted Modified California PRG



ALAMEDA POINT ALAMEDA, CALIFORNIA



GROUNDWATER ANALYTICAL RESULTS FOR CHEMICALS USED AT SITE 9

Remedial Investigation Report, Operable Unit 2A, Internal Draft

Chemical	Tap water PRG (µg/L)	Range of Concentrations (µg/L)	Sampling Location of Maximum Detected Concentration
1,1,1-TCA	3,200	0.7 to 3	D09-01
1,1-DCA	2.0*	0.5 to 1,200	S09-DGS-DP02
1,2-DCA	0.12	0.5 to 0.7	S09-DGS-DP01
PCE	0.66	0.7 to 3	MW410-3
TCE	0.028	0.7 to 22	SHP-S09-09
1,2-DCE (total)	61 (as cis-)	0.5 to 2,400	SHP-S09-10
Vinyl chloride	0.02*	0.5 to 280	9-1
DCP	0.16	2	DHP-S09-09
TCP	30	0.3	MW410-2
Benzene	0.34	0.58 to 5.6	P-9-MWS-04
Ethylbenzene	2.9	0.5 to 150	9S-CH3
Toluene	720	0.2 to 230	DHP-S09-06
Xylene	210	2 to 1,200	SHP-S09-10
Chromium	55,000	0.51 to 350	MW410-3
Naphthalene	6.2	0.9 to 29,000	SHP-S09-10
Methylene chloride	4.3	0.58 to 7.3	9-3
Phenol	22,000	7 to 59	S09-DGS-DP05

Residential PRG is provided for reference only. Risks are quantified in the HHRA section of this document.

* denoted Modified California PRG



ALAMEDA POINT ALAMEDA, CALIFORNIA



Site 9 – HHRA Risk Characterization

Arsenic* in soil
Vinyl Chloride, Benzene, TCE, Ethylbenzene,
and Arsenic* in Groundwater
Total Site Carcinogenic Risk: 3.2E-03

Arsenic* in Soil
Naphthalene and 1,2-DCE in Groundwater
Total Site Noncancer Hazard: 130

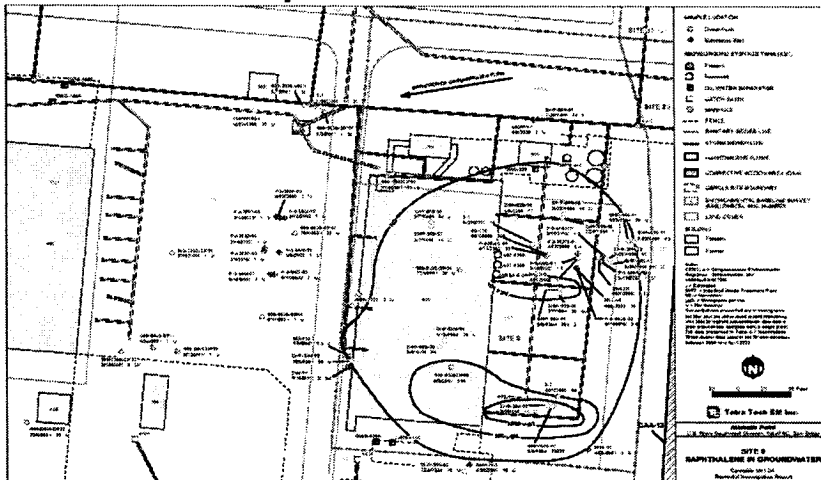
* Background



ALAMEDA POINT ALAMEDA, CALIFORNIA



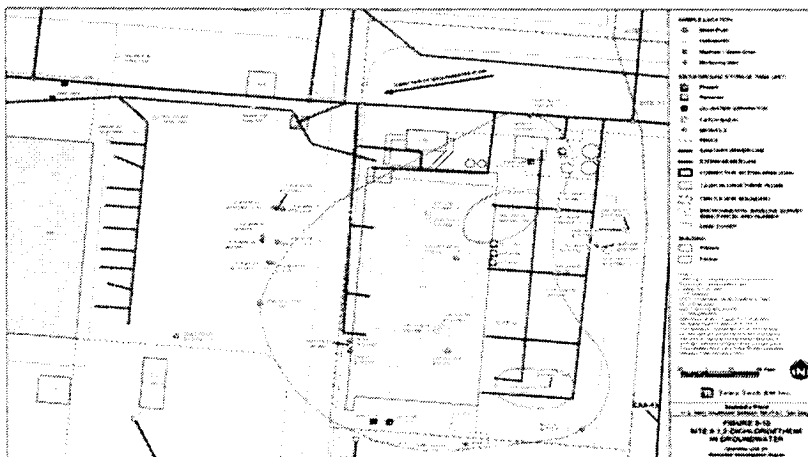
Site 9 – Naphthalene in Groundwater



ALAMEDA POINT ALAMEDA, CALIFORNIA

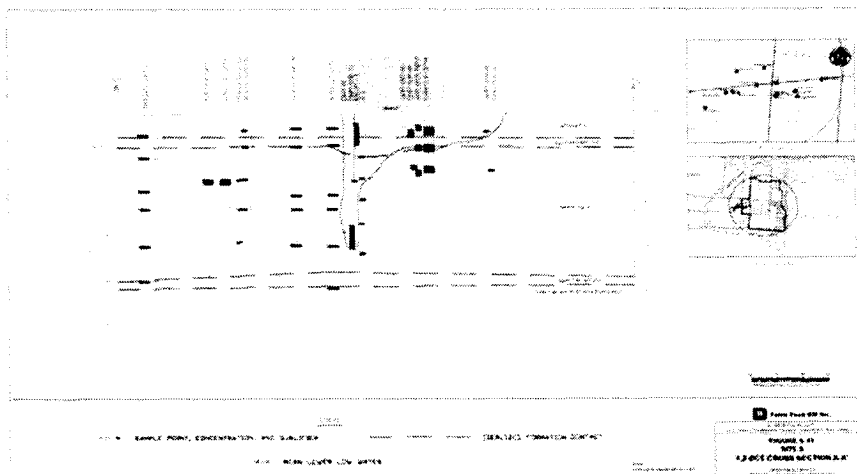


Site 9 – 1,2-DCE Groundwater Plume

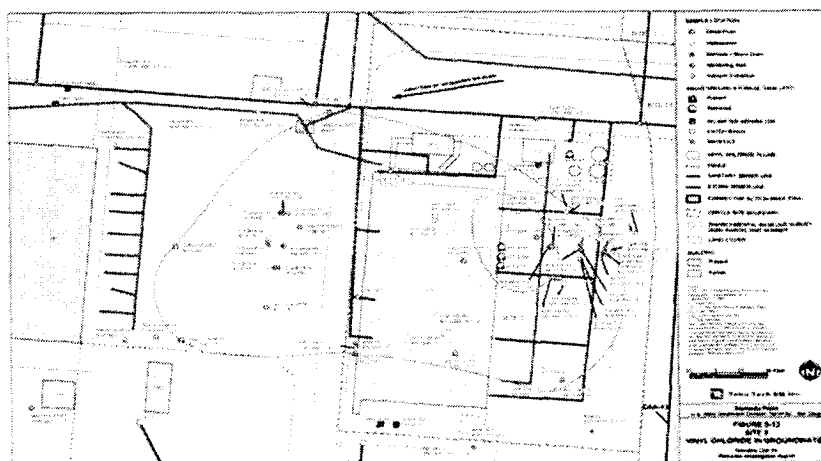




Site 9 – 1,2-DCE Cross Section



Site 9 – Vinyl Chloride Groundwater Plume

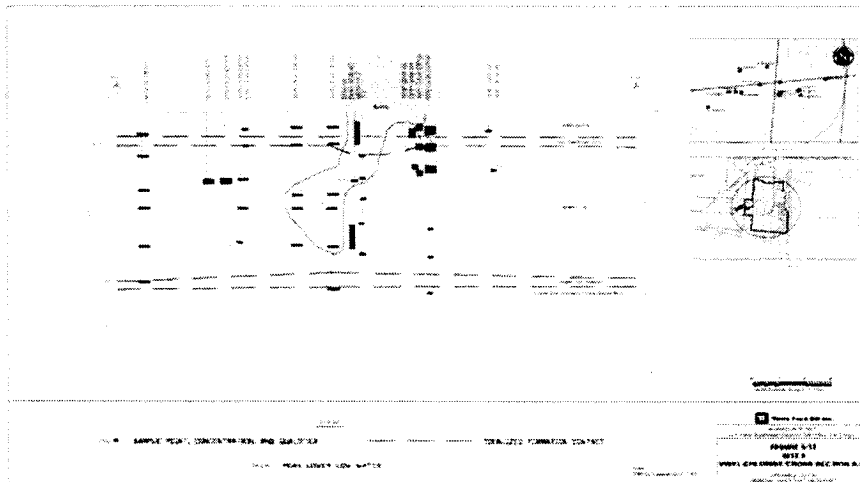




**ALAMEDA POINT
ALAMEDA, CALIFORNIA**



Site 9 – Vinyl Chloride Cross Section



**ALAMEDA POINT
ALAMEDA, CALIFORNIA**



**Site 13– Building 397
Former Refinery Area**

- Previous site of the Pacific Coast Refinery (1873-1903)
- Mini-storage Area, and RV parking lot
- Building 397 (Jet Engine Test Cell)
- NADEP GAP 62
- OWS-397-A through OWS-397-D
- AST 324 through AST 328
- Area of Concern-09 (AOC-09)
- Corrective Action Area CAA-13 (On-going TPH Removal)



ALAMEDA POINT ALAMEDA, CALIFORNIA



GROUNDWATER ANALYTICAL RESULTS FOR CHEMICALS USED AT SITE 13

Chemical	Tap water PRG (µg/L)	Range of Concentrations (µg/L)	Sampling Location of Maximum Concentration
Benzene	0.34	0.5 to 1,400	CA13-17
Ethylbenzene	2.9	0.2 to 130	B13-28
Toluene	720	0.3 to 65	CA13-13
Xylene	210	0.3 to 530	B13-28
1,2,4-Trimethylbenzene	12	0.5 to 40	CA13-12
1,3,5-Trimethylbenzene	12	0.5 to 16	CA13-12
Naphthalene	6.2	1.1 to 210	M13-07
2-methylnaphthalene	NA	0.9 to 130	M13-07

Residential PRG is provided for reference only. Risks are quantified in the HHRA section of this document.
* denoted Modified California PRG



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Site 13 – HHRA Risk Characterization

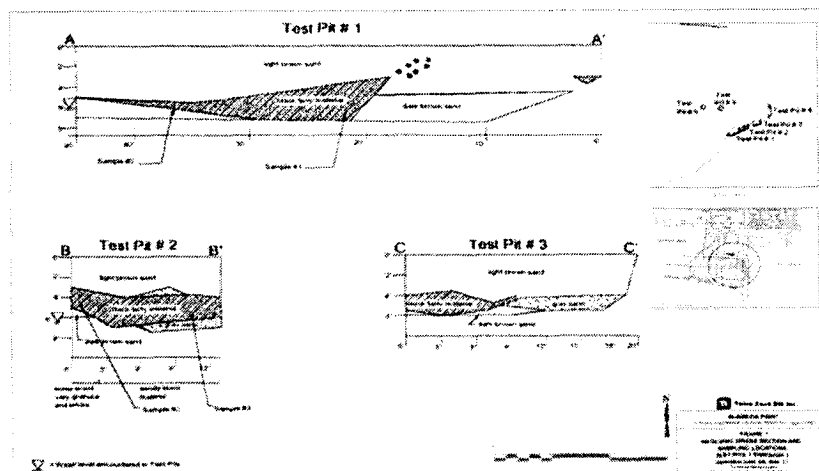
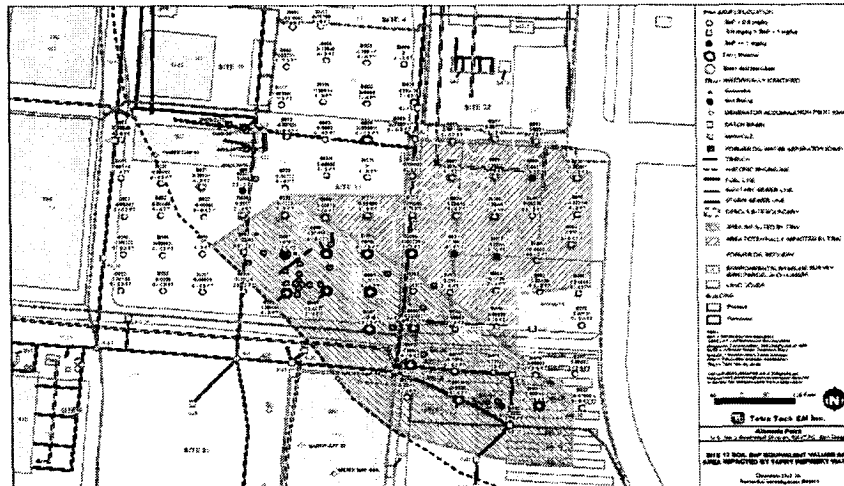
Arsenic*, Benzene, and BaP in soil
Arsenic* and Benzene in groundwater
Total Site Carcinogenic Risk: 7.2E-04

Background metals in groundwater
Total Site Noncancer Hazard: 31

Lead in in the TRW was determined to be a risk
based on concentrations present.

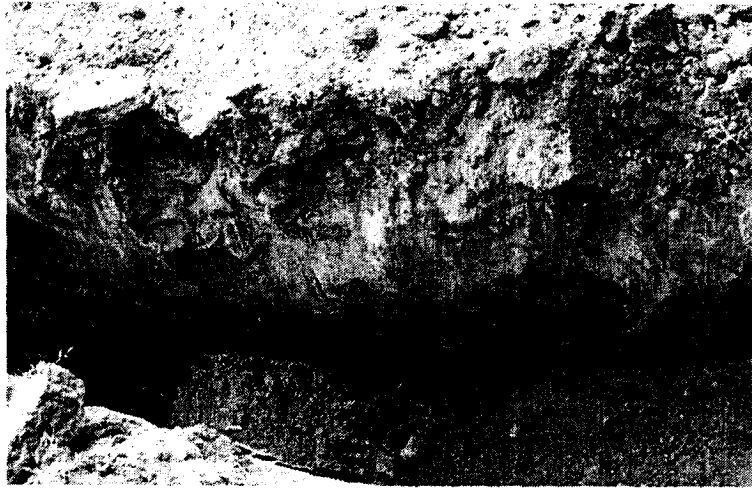
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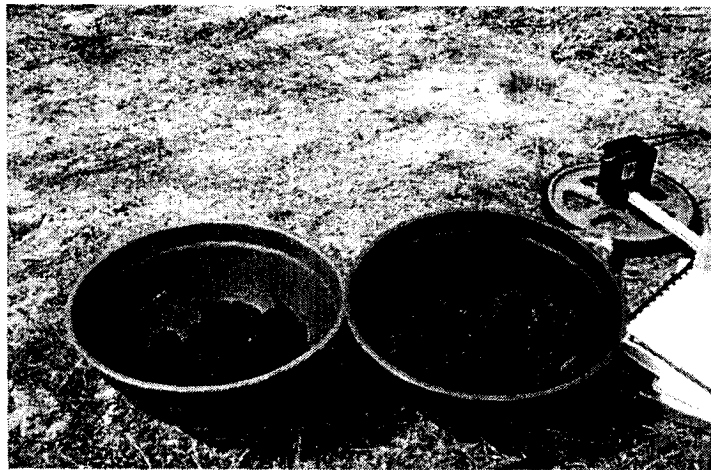


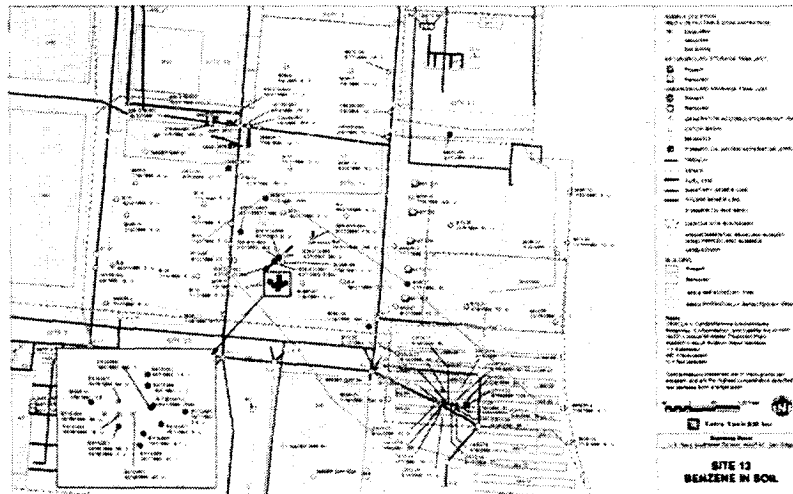


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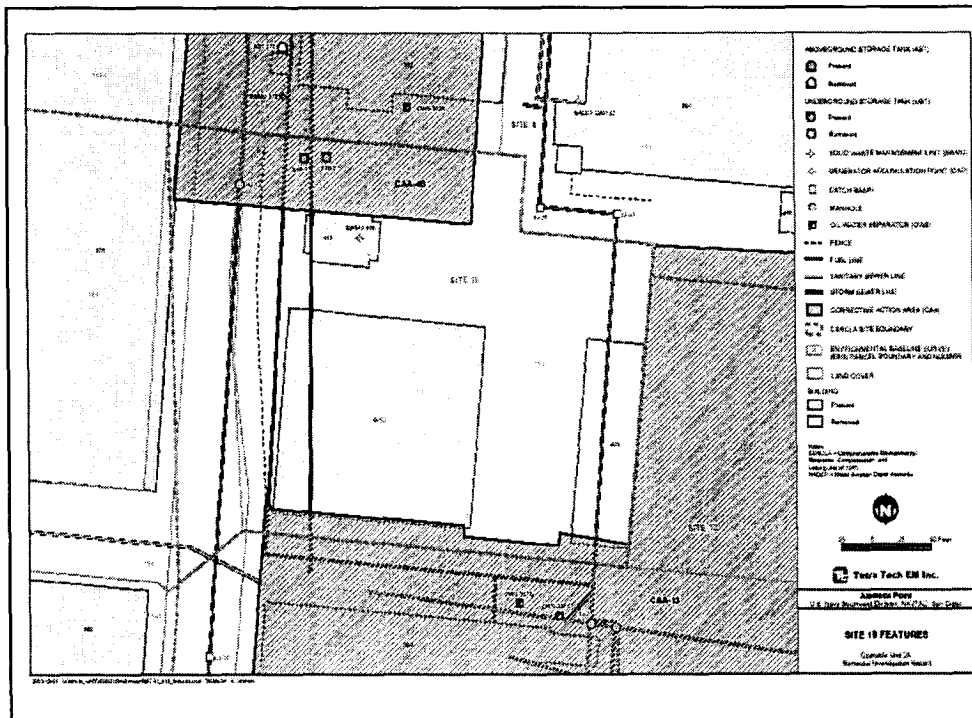
ALAMEDA POINT
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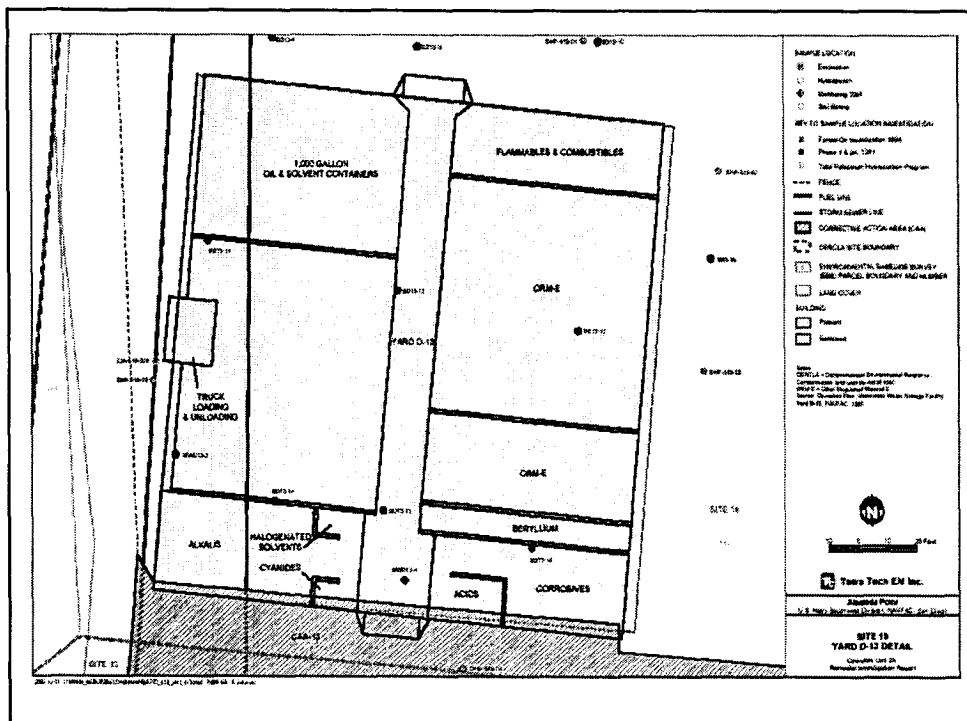


Site 19 – Yard D-13

Former Hazardous Waste Storage Yard

- Building 616 office and storage space
- SWMU 616
- Former Building 609 engine part storage
- Yard D-13 Former Hazardous Waste Storage Yard
- USTs 616-1 and 616-2





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SOIL ANALYTICAL RESULTS FOR CHEMICALS STORED AT SITE 19

Chemical	Residential PRG (mg/kg)	Range of Concentrations (mg/kg)	Sampling Location of Maximum Concentration
1,1-DCA	2.8*	0.001	BD13-15 [10.5-11.0]
1,2-DCA	0.28	Not detected	Not available
1,2-DCP	0.34	Not detected	Not available
Arsenic	0.39	1.4 J to 14.0	BD13-8 [13.0-13.5]
Benzene	0.6	Not detected	Not available
Manganese	1,800	72.0 to 897.0	MWD13-2 [2.0-2.5]
PCE	1.5	0.002J to 0.004J	BD13-10 [2.0-2.5]
TCE	0.053	0.004J	BD13-10 [2.0-2.5]
BaP	0.062	0.023J to 0.675	C3S019009 [0.5-2.0]

Residential PRGs are provided for reference only. Risks are quantified in the HHRA section of this document.

* denoted Modified California PRG



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GROUNDWATER ANALYTICAL RESULTS FOR CHEMICALS STORED AT SITE 19

Chemical	Tap water PRG (µg/L)	Range of Concentrations (µg/L)	Sampling Location of Maximum Concentration
1,1-DCA	2.0*	0.5 to 27	DHP-S19-02
1,2-DCA	0.12	0.7	DHP-S19-04
1,2-DCP	0.16	2	M19-05
Arsenic	0.045	0.64 to 59	MWD13-1
Benzene	0.34	0.2 to 2	MWD13-4
Manganese	880	0.23J to 12,000J	D19-01
PCE	0.66	0.4J to 22	MWD13-4
TCE	0.028	0.6 to 4.2	MWD13-4
BaP	0.0092	Not detected	Not detected

Residential PRG is provided for reference only. Risks are quantified in the HHRA section of this document.

* denoted Modified California PRG



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Site 19 – HHRA Risk Characterization

Arsenic* and BaP in soil

Arsenic*, TCE, and PCE in groundwater

Total Site Carcinogenic Risk: 3.0E-04

None in soil

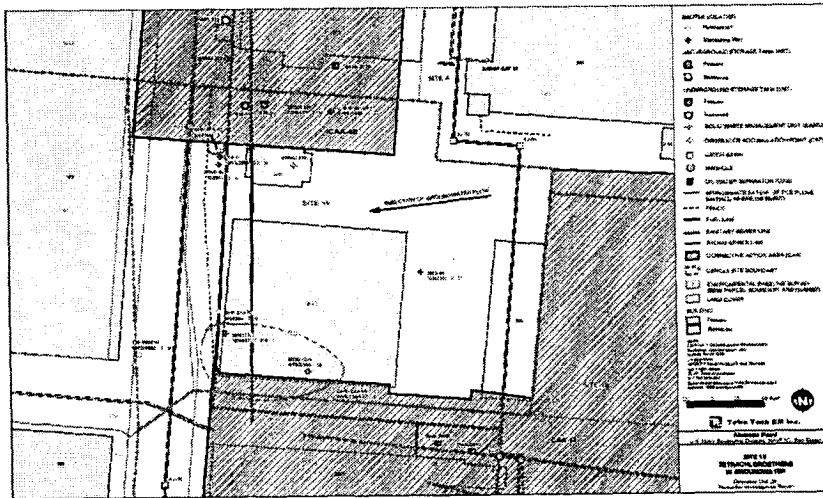
Background metals in groundwater

Total Site Noncancer Hazard: 17

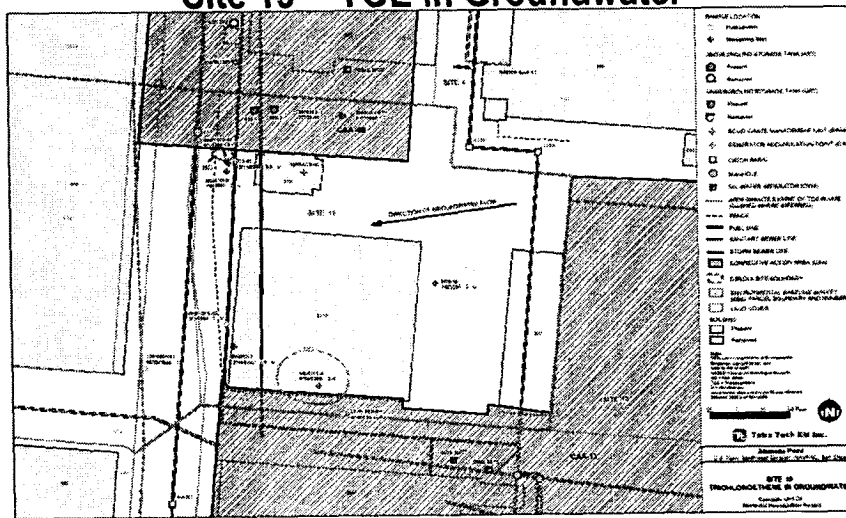
* Background



Site 19 – PCE in Groundwater



Site 19 – TCE in Groundwater



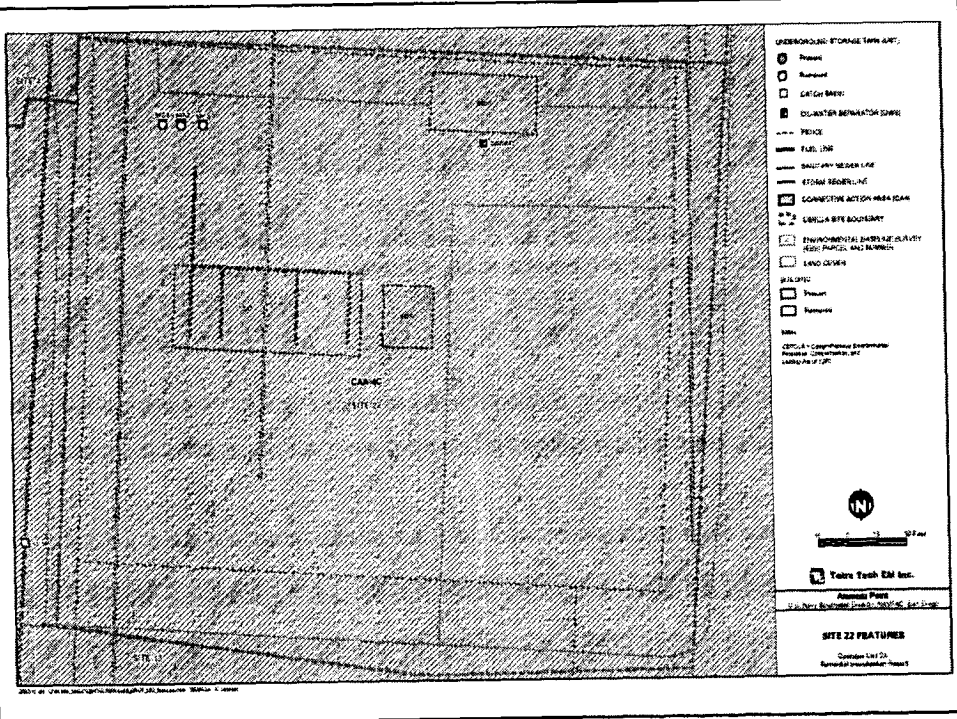


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Site 22 – Former Gasoline Station

- Former Barracks
- Former Gasoline Station (Structure 547)
- Former Cashier Kiosk (Building 547-A)
- Former UST 547-1 through UST 547-3
- CAA-4C (CAP and Work Plan for TPH Remediation submitted)
- Former Car Wash (Building 547-1)





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SOIL ANALYTICAL RESULTS FOR CHEMICALS USED AT SITE 22

Chemical	Residential PRG (mg/kg)	Range of Concentrations (mg/kg)	Sampling Location of Maximum Concentration
Benzene	0.6	0.006 to 3.8	547-1
Ethylbenzene	8.9	0.003 to 570.0	B07C-14 (280-S7C-013)
Toluene	520	0.002 to 840.0	B07C-14 (280-S7C-013)
Xylene	2,700	0.002 to 2,600.0	B07C-14 (280-S7C-013)
Naphthalene	56	0.0027 to 110.0	B07C-14 (280-S7C-013)
1,2-DCA	0.28	0.007 to 0.014	B547-8 [11.0-11.5]

Residential PRGs are provided for reference only. Risks are quantified in the HHRA section of this document. * denoted Modified California PRG



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GROUNDWATER ANALYTICAL RESULTS FOR CHEMICALS USED AT SITE 22

Chemical	Tap water PRG (µg/L)	Range of Concentrations (µg/L)	Sampling Location of Maximum Concentration
Benzene	0.34	0.3 to 34,000	CAA4C-DGS-DP01
Ethylbenzene	2.9	0.7 to 7100	CAA4C-DGS-PZ01
Toluene	720	0.3 to 34,000	CAA4C-DGS-DP01
Xylene	210	1 to 36,000	CAA4C-DGS-PZ01
Naphthalene	6.2	15 to 380	MW547-3
1,2-DCA	0.12	0.8 to 38	CAA4C-DGS-DP05

Residential PRG is provided for reference only. Risks are quantified in the HHRA section of this document.
* denoted Modified California PRG



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Site 22 – HHRA Risk Characterization
Groundwater

Receptor: Potential Future Child

Cancer Medium	Chemical Risk Drivers	RME Carcinogenic Risk (EPA)
Groundwater (domestic use):	Arsenic*	9.2E-04
	TCE	8.7E-05
	PCE	2.4E-06
Groundwater Risk from Petroleum Products (domestic use and vapor intrusion):	Benzene	1.5E-03
	Ethylbenzene	4.3E-05
	1,2-DCA	1.1E-05
	Subtotal for Groundwater	2.6E-03

Receptor: Potential Future Adult/Child

Noncancer Medium	Risk Drivers	RME Noncancer HI (EPA)
Groundwater	Arsenic	8.79
	Manganese	29.5
	TCE	2.76
Groundwater from petroleum products:	Thallium	3.65
	Benzene	29.4
	Naphthalene	3.34
	Subtotal for Groundwater	77.4



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Site 22 – HHRA Risk Characterization

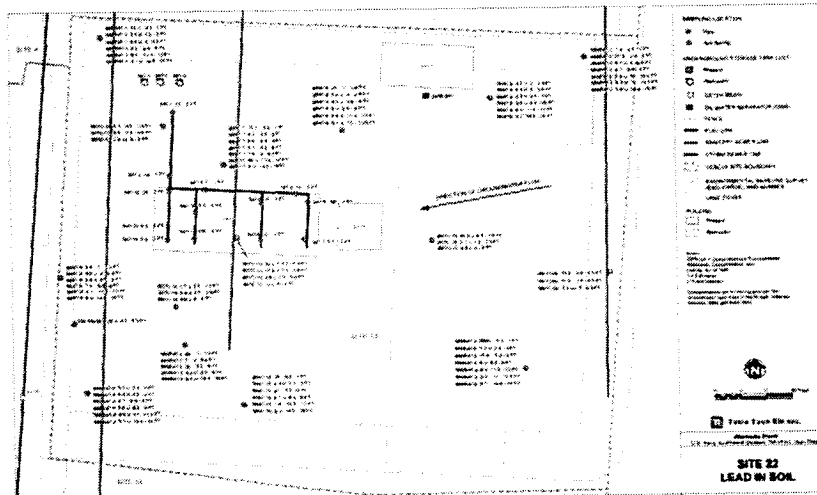
Total Site Carcinogenic Risk: 2.6E-03

Total Site Noncancer Hazard: 85

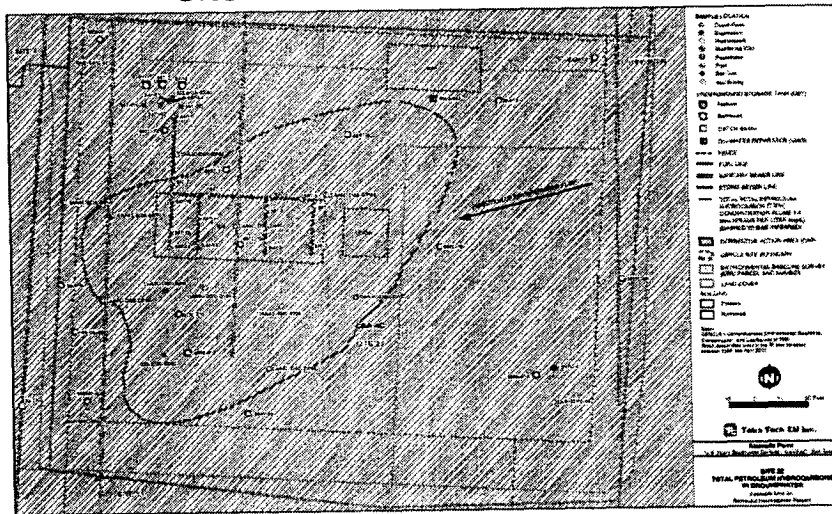
Lead in soil was determined to pose a risk by
Lead Spread 7 risk assessment.



ALAMEDA POINT ALAMEDA, CALIFORNIA Site 22 - Lead in Soil

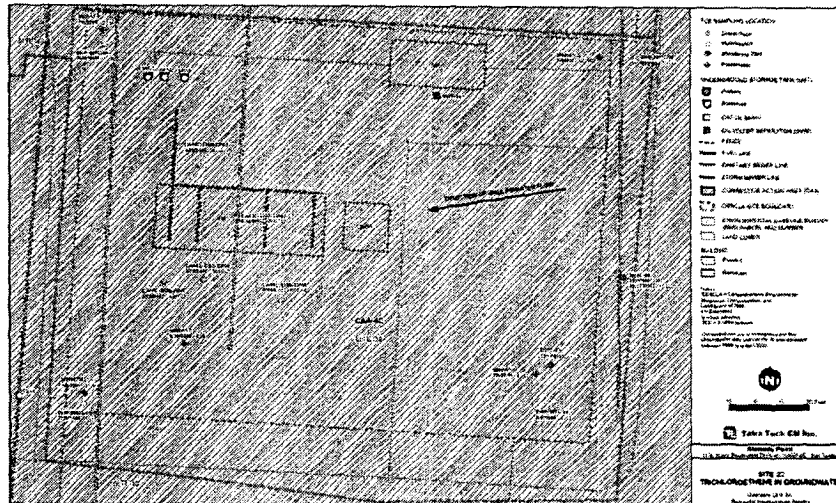


ALAMEDA POINT ALAMEDA, CALIFORNIA Site 22 - TPH in Groundwater



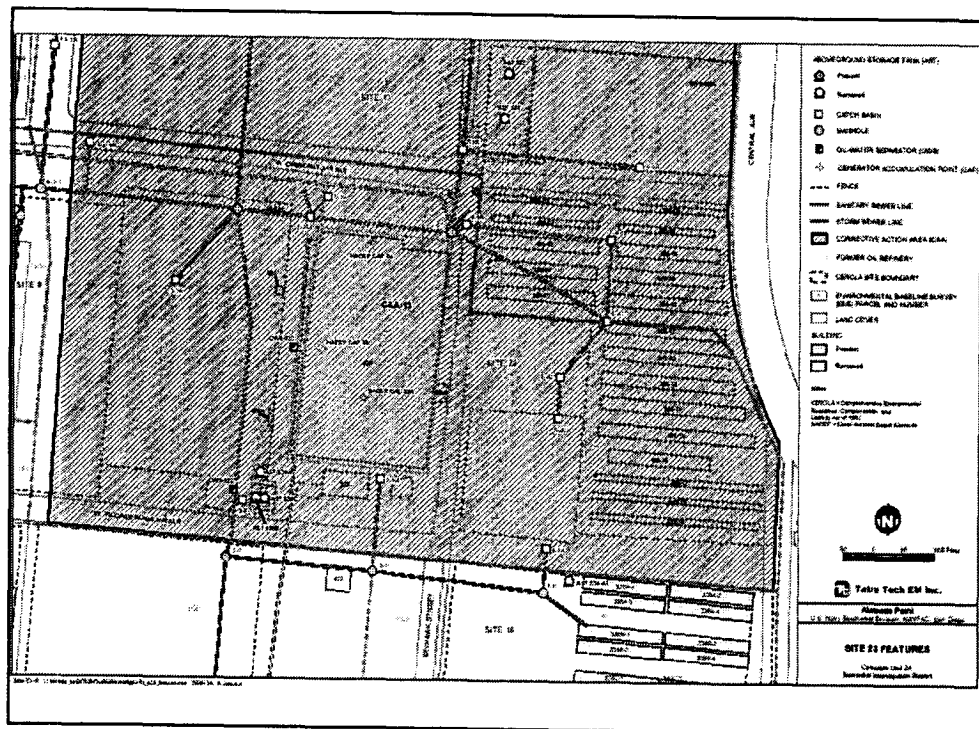


Site 22 – TCE in Groundwater



Site 23 – Building 530

- Former Plane Defueling Area
- Former Building 460A
- Building 530
- Buildings 529, 600, and 606
- Former SWMU/GAP 63, 63A, and 64A
- Former ASTs 530A through 530C
- Buildings MS-11 through MS-19 (Navy mini-exchange)
- CAA 13 (On-going TPH Removal)



ALAMEDA POINT ALAMEDA, CALIFORNIA



SOIL ANALYTICAL RESULTS FOR CHEMICALS USED AT SITE 23

Chemical	Residential PRG (mg/kg)	Range of Concentrations (mg/kg)	Sampling Location of Maximum Concentration
TCE	0.053	Not detected	Not applicable
Benzene	0.6	0.001 to 0.59	211-SS-002
Ethylbenzene	8.9	0.036 to 16.0	211-SS-003
Toluene	520	0.001 to 16.0	530-2-MOJ
Xylene (total)	270	0.003 to 12.0	MW530-1
PAHs (represented as BaP Equivalent)	0.062	0.001 to 2.979	C3S023B016
Naphthalene	56	0.038 to 33.0	211-SS-004
Lead	150*	1.3 to 120	BOR-26
Zinc	23,000	10 to 130	MW530-3
Silver	390	0.38	B410-06
Chromium	210	7.3 to 89	BOR-22
Nickel	1,600	4.7 to 91	BOR-22
Mercury	6.1	Not detected	Not applicable
Tin (dibutyl, monobutyl, and tetrabutyl)	47,000	Not detected	Not applicable

Residential PRG is provided for reference only. Risks are quantified in the HHRA section of this document.

* denoted Modified California PRG



ALAMEDA POINT ALAMEDA, CALIFORNIA



GROUNDWATER ANALYTICAL RESULTS FOR CHEMICALS USED AT SITE 23

Chemical	Tap water PRG (µg/L)	Range of Concentrations (µg/L)	Sampling Location of Maximum Concentration
TCE	0.028	2	MW410-4
Benzene	0.34	0.2 to 67	211-002-11
Ethylbenzene	2.9	1.6 to 79	MW530-1
Toluene	720	0.9 to 11	211-0002-11
Xylene (total)	210	4.4 to 660	530-MJ-MW-1
Sec-butylbenzene	240	0.2 to 1,000	530-MJ-MW-1
1,2,4-Trimethylbenzene	12	4.1 to 860	530-MJ-MW-1
BaP	0.0092	0.6	SHP-S10B-05
Benzo(b)fluoranthene	0.092	0.8	SHP-S10B-05
Naphthalene	6.2	21 to 1,100	530-MJ-MW-1
Lead	NA*	0.029 to 360	D10B-01
Zinc	11,000	1.7 to 7,340	DHP-S10B-01
Silver	180	0.019 to 18	MW530-1
Tin	22,000	Not analyzed	Not applicable
Chromium	55,000	0.16 to 650	MWOR-5
Nickel	730	0.42 to 11,400	DHP-S10B-01
Mercury	3.6	0.12 to 1.7	M10B-01

Residential PRG is provided for reference only. Risks are quantified in the HHRA section of this document.

* denoted Modified California PRG



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Site 23 – HHRA Risk Characterization

Arsenic* and BaP in soil

Arsenic* and Ethylbenzene in groundwater

Total Site Carcinogenic Risk: 6.5E-04

None in soil

Naphthalene in groundwater

Total Site Noncancer Hazard: 15

* Background



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Conclusions and Recommendations

CERCLA SITE	MEDIA	HHRA INCREMENTAL CARCINOGENIC RISK			HHRA INCREMENTAL NON-CARCINOGENIC RISK		ECOLOGICAL RISK			HIGHEST PAH CONCENTRATION (mg/kg)			ELEVATED LEAD	TARRY REFINERY WASTE	RECOMMENDATION
		<1.0E-06	1.0E-06 to 1.0E-4	>1.0E-04	<1.0	≥1.0	No	Low	High	<0.62	0.62 to 1.0	>1.0			
9	Soil	X			X		X			X					NFA
	GW			X		X		NA							FS
13	Soil		X		X		X				NA		X	X	FS
	GW		X		X			NA			NA			X	FS
19	Soil		X		X		X				X				NFA
	GW		X		X			NA			NA				FS
22	Soil							X			X		X		FS
	GW				X			NA			NA				NFA
23	Soil		X		X		X					X		X	FS
	GW		X			X		NA			NA				NFA

Site 9 - FS for Chlorinated Hydrocarbons/VOCs in Groundwater

Site 22 - FS for Lead in soil

Site 13 - FS for TRW in Soil/Groundwater

Site 23 - FS for PAHs in soil

Site 19 - FS for Chlorinated Hydrocarbons/VOCs in Groundwater

ATTACHMENT B-2
BCT ACTIVITIES UPDATE
(One Page)

March 2004 BCT Activities

I. Monthly BCT Meeting, March 16, 2004

Topics Included:

A. An update on the progress of the Site Investigation reports for transfer parcels EDC-5, PBC-1A, EDC-3, FED-1A, EDC-21, EDC-17, EDC-12, and PBC-3:

The human health risk calculations are progressing in accordance with agreements reached by the BCT during the February 10th meeting. However, the ecological risk assessment was posing problems for the Navy risk calculators who were unsure what the regulatory agencies wanted from an ecological assessment in an SI document. The BCT agreed to bring in eco experts Ned Black from EPA and Jim Polisini from DTSC to participate on a conference call to answer the Navy's questions.

B. A 56-slide overview by the Navy and their contractors of the Draft Operable Unit 2A Remedial Investigation Report which covers IR Sites 9, 13, 19, 22, and 23:

IR Site 9 consists of Building 410, a paint stripping facility; IR Site 13, the former oil refinery; IR Site 19 Yard D-13, used for hazardous waste storage; Site 22 Building 547, a former service station; and Site 23 Building 530, a missile rework operations/former plane defueling area. The report was submitted by the Navy to the agencies and the public on February 29, 2004 and comments are due on April 27, 2004. The overview presented site histories, sampling investigations, contaminants of concern in soil and groundwater and a summary of the human health and ecological risk assessment results for each site.

C. A discussion on the Site Management Plan schedule which needs to be updated by the middle of June in accordance with the Federal Facility Agreement:

Many milestone dates have slipped due to funding shortfalls and also decisions that some documents need to go through extensive revisions (e.g. OU 5 Soil FS). The BCT discussed using MicroSoft Project as a tracking tool to help incorporate any changes in document submittal dates and also agreed to keep the SMP schedule deliverables and milestones in their current format using the software. The Navy will present a revised schedule with logic for new dates and will include additional documents that need to be tracked in the SMP at the April BCT meeting. The proposed changes and additions to the SMP will be presented to the RAB in the May or June RAB meeting.

II. Eco Risk Conference Call on March 24th with DTSC and EPA:

The Navy and the agencies held a short conference call to discuss the approach needed to evaluate ecological risk in the Site Investigation (SI) reports. Ned Black, EPA's ecological expert, stated that there is no formal CERCLA guidance for assessing ecological risk at the SI stage of an investigation, although there are clearly defined steps required at the Remedial Investigation stage. His recommendation was to perform the equivalent level to that used to rank a site for the National Priorities List, known as the Hazard Ranking System (HRS). The HRS focuses on whether special status species are present at a site and whether there is a completed pathway for those species to be exposed to site contamination. Dr. Black agreed that for the SI parcels the presence of special status species and a completed exposure pathway would determine that an RI level ecological risk assessment needed to be performed. Otherwise, in the absence of special status species and a completed pathway, the transfer parcels would pass the ecological screening.

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San Diego, CA 92161-8517

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CTO: 010
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Alameda Point, Alameda, California

FROM: 
Michael Wanta, Contract Manager

DOCUMENT TITLE AND DATE:

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